Making Real Estate Investment Trust Properties Energy Efficient

**Project Overview**

Buildings are responsible for a large amount of U.S. energy use and greenhouse gas emissions. Real Estate Investment Trusts (REITs) hold a significant amount of commercial properties, which have high energy use intensity. REITs have a special role to play in this initiative because they are influential private sector actors who have a lot at stake, and who could make significant gains from effective policies. This project reveals some useful insights about the exposure of REIT properties to building benchmarking ordinances. Using Kernel Density tools Map 2 illustrates the concentrations of REIT properties already covered by benchmarking ordinances. Using the Institute for Market Transformation (IMT) data to label the ten cities with existing ordinances. In addition, California, Washington State and Montgomery County, Maryland have existing ordinances. Map 3 illustrates the concentrations of REIT properties not covered by benchmarking ordinances. Cities participating in the City Energy Project, which are likely to adopt ordinances in the near future, have also been labeled. In Map 4 I illustrate the concentration of Commercial REIT properties, which are not covered by ordinances. These make up 93% of REIT properties (see Graph 2) and use more energy than residential properties. To select these properties I used Select by Attribute tools to separate commercial REIT properties from residential REIT properties. In order to generate this map I used select by attribute to separate commercial REIT properties from residential REIT properties. Map 5 illustrates the distribution of office properties and health care properties not covered by ordinances. To select these properties I used select by attribute to separate commercial properties by property type. I selected these property types because offices are one of the largest property types owned by REITs, and health care properties generally have high energy use. Graph 3 illustrates the proportion of commercial property types owned by REITs.

I carried out some research with spreadsheet data to identify priority areas for benchmarking ordinances. Figure 1 lists the cities with the largest amount of REIT property in terms of square footage. These are areas where new ordinances would have the biggest impact. Figure 2 illustrates how the percentage of total REIT property covered will increase as more cities adopt ordinances.

**Methodology**

The REIT property data was originally received from CoStar in spreadsheet form. Using the latitude and longitude coordinates I transformed the spreadsheet into spatial data. Using select by attribute tools I separated the data based on properties covered by existing ordinances and those that are not. Using Kernel Density tools Map 2 illustrates the concentrations of REIT properties already covered by benchmarking ordinances. I used Institute for Market Transformation (IMT) data to label the ten cities with existing ordinances. In addition, California, Washington State and Montgomery County, Maryland have existing ordinances. Map 3 illustrates the concentrations of REIT properties not covered by benchmarking ordinances. Cities participating in the City Energy Project, which are likely to adopt ordinances in the near future, have also been labeled. In Map 4 I illustrate the concentration of Commercial REIT properties, which are not covered by ordinances. These make up 93% of REIT properties (see Graph 2) and use more energy than residential properties. To select these properties I used Select by Attribute tools to separate commercial REIT properties from residential REIT properties. Map 5 illustrates the distribution of office properties and health care properties not covered by ordinances. To select these properties I used Select by Attribute to separate commercial properties by property type. I selected these property types because offices are one of the largest property types owned by REITs, and health care properties generally have high energy use. Graph 3 illustrates the proportion of commercial property types owned by REITs.

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**Insights**

This project reveals some useful insights about the exposure of REIT properties to building benchmarking ordinances:

1. Exposure of REIT properties to building benchmarking ordinances remains very limited.
2. Targeting commercial REIT properties with building benchmarking ordinances is likely to have the greatest impact in reducing energy use.
3. Large cities with high concentrations of REIT properties should be targeted for benchmarking ordinances.